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ABSTRACT

The purpose of this study was to investigate whether or not infants who had experienced different types of naturally-occurring, significant separations from an attachment figure during the first year of life differed in their response to separation at 12 months of age. Thirty-three 12-month-old Caucasian infants from middle class, intact families were divided into three groups on the basis of the frequency/duration patterning of brief, nontraumatic separations from the mother during their first year. One group of infants had experienced separation only when their parents left them occasionally with a babysitter (as for an evening); a second group had experienced one or two separations of relatively long duration (when parents went on vacation); a third group had experienced frequent regularly-scheduled separations of short duration (when mothers worked or attended school). Subjects' response to separation from and reunion with the mother was assessed at 12 months of age. No differences between groups in mean response were found. The data suggest that brief separations from a primary attachment figure need not have deleterious effects if an infant is provided with high-quality substitute care. (Author/MS)

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Patterning of Infants' Prior Separation Experience in
Relation to Later Separation Reaction¹

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For the past thirty years, since the publication of Goldfarb's and Spitz's studies of young children in institutions, there has been widespread concern about the effects of separation upon early social and cognitive development. It is now recognized, as Yarrow (1964), Rutter (1972) and Bowlby (1973) have pointed out, that separation is not a single variable. Both the immediate and long-term behavioral correlates of separation experiences vary depending upon many different factors, including characteristics of the child and the quality of prior relationships as well as the circumstances coincident with and following the separation. Nonetheless, it is now well documented that young children are stressed by traumatic or prolonged separation from an attachment figure, particularly if the separation occurs between the ages of six months and five years. During separation, a sizeable proportion of children display a progressive reaction of, first, protest, second, apathy, and, finally, detachment. Furthermore, after being reunited with their families many children display disturbances in functioning for varying periods of time, including a decreased ability to tolerate subsequent separations. These findings have been broadly and rather indiscriminantly generalized to separations which are shorter and less traumatic in nature, such as those that occur when a mother returns to work and leaves her baby with a substitute caregiver. However, there is very little experimental data specifically addressed to this latter issue, and the data that exists is contradictory. Caldwell (1970), for example, found no

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disturbances in mother-infant attachment in a group of twelve-month-old daycare infants. She even suggested that the daycare experience may have facilitated social relationships with persons other than the mother. Blehar (1974), on the other hand, found a correlation between daycare experience and anxious attachment. She attributed this disturbance to the effects of frequent daily separations. Likewise, Moore (1969) found that babies who had been regularly separated before two years of age displayed heightened dependence on mother at six years of age. Bowlby (1973), too, has cautioned that even very brief separations have some potential for harm. It seems clear, particularly when one considers the increasing numbers of mothers of infants and very young children who are entering the work force, that we need additional research in this area.

In the present study we were interested in whether or not infants who had experienced different types of naturally-occurring, significant separations during the first year of life differed in their response to separation at twelve months of age. By way of contrasting these babies' experience with that of children in hospitals or residential nurseries, we would characterize all of their separations as non-traumatic in nature.

The sample consisted of 33 twelve-month old Caucasian infants from middle-class, intact families seen in a larger study of attachment behavior. These infants were divided into three groups on the basis of the frequency/duration patterning of separations from mother during the first year (See Table 1).

The first group, the minimally-separated group, contained eighteen babies. The only type of separation that these babies had experienced was when the parents had left them with an occasional babysitter as, for example,

when they went out in the evening. The second group, the infrequently-separated group, contained seven infants. These babies had experienced one or two separations of relatively long duration. All of these separations had occurred when the parents went on vacation. They averaged five consecutive days in length, with a range from fifteen hours to twelve days. All of the separations involved at least one night spent away from the parents. The third group, the frequently-separated group, contained eight infants. These babies had experienced regularly-scheduled frequent separations of short duration. Most of the separations occurred because the infant's mother was working or going to school. Over the course of the first year, this third group had been separated an average of 139 times for an average of five and one half hours each time. All of them had been separated at least two and usually five times a week for at least eight consecutive weeks. There were no overnight separations. The babies in the infrequently- and frequently-separated groups had, like the minimally-separated group, also been left with occasional babysitters. For that reason, the minimally-separated group can be considered to be a control-group.

These three groups of babies were compared on four measures of response to separation and six measures of response to reunion with the mother. All of the measures were obtained during a maternal interview and a short staged separation sequence in our laboratory when the baby was twelve months of age. Following their arrival in our playroom, the mother was interviewed for approximately thirty minutes with respect to various aspects of the baby's social experience during the first year. The baby was present during the interview and was free to play with an array of toys on the floor. Immediately

following the interview, mother left the baby in the playroom with the interviewer, closing the door behind her as she went. Three minutes later, she returned, greeting the baby in a natural fashion as she came in the door. During the separation, the interviewer attempted to console the baby if he was distressed and attempted to initiate mutual play with the toys. The entire session was videotaped and, at a later time, the baby's behavior was scored by independent observers using behavior scales adapted from those used by Ainsworth in her Strange Situation. Two of the dependent variables, % of separations from mother during the twelfth month accompanied by baby distress and % of reunions with mother during the twelfth month accompanied by a positive greeting from the infant were derived from the interview data. The remaining dependent variables were measures of the baby's response to the laboratory separation. They included his reaction to the interviewer during mother's absence, the amount of distress at separation and reunion, and greeting and proximity-promoting and maintaining responses to mother upon her return.

Results of the data analysis are presented in Table 2. Using analysis of variance, we found no significant differences in means among the three groups on any of the ten dependent variables. However, for eight of the variables, the variances for the infrequently-separated group were smaller than for the other two groups. Using Bartlett's test for homogeneity of variance, we found that in the case of two of these variables, Duration of Distress during the laboratory separation and Duration of Distress during the laboratory reunion, variances were significantly smaller at the .01 level or beyond. That is, as a group, babies who had been previously separated once

or twice for a relatively long period of time reacted more homogeneously to separation at twelve months of age than did the other two groups. These babies showed little, if any, distress at separation. In contrast, the responses of infants in the other two groups ranged from no distress to so much distress that the laboratory procedure had to be terminated early.

In view of the fact that the separation histories of these three groups of babies were clearly very different, our finding of no mean differences in response to separation at twelve months of age was surprising. One could predict that idfferences would be found. For example, with respect to frequency of separations, one might predict that repeated separations would represent a cumulative stress for the infant, particularly during the first year when the concept of the permanent object is being consolidated, and result in increased sensitivity to subsequent separations. Ainsworth (1973) found significant increases in both attachment behavior and distress when she retested a group of one-year-old infants in her Strange Situation after a two-week interim period. Bowlby (1973) has suggested that any experience which leaves the child with the feeling that his attachment figure is inaccessible to him can contribute to later anxiety.

One could also predict a subsequent sensitivity to separation for the infrequently-separated group on the basis of the relatively long duration of their separations. In a study of ten children placed in a residential nursery for periods ranging from twelve days to twenty-one weeks, Heinicke & Westheimer (1966) found that half strongly protested subsequent separations for up to three months following reunion with mother. Schaffer (1958) found that, among infants seven to twelve months of age who had been hospitalized for about two weeks, a reaction of excessive crying when subsequently

left by mother continued in some cases for as long as eighty days.

Since there was reasonable basis for believing that differences among the groups might exist, how do we account for the fact that they did not? First, of course, it is possible that our brief laboratory separation situation was not stressful enough to elicit existing group differences in sensitivity. However, this explanation seems unlikely in view of the fact that we obtained an appreciable range of response on all of our dependent variables.

Another possibility is that it is not how often or for how long a baby is left that is of critical importance, but where and with whom. Many writers have stressed the importance of familiar surroundings and consistent caregiving from a familiar figure in mitigating negative separation reactions. For this reason, we took a closer look at the circumstances surrounding the separations of the babies in the infrequently- and frequently-separated groups (See Table 1).

All of the babies in both groups had been left in familiar settings, either their own home or that of the caregiver. The mean number of different caregivers was very low for both groups. Only one infant had been left with more than two different adults, whereas 67% of them had received all of their care from a single substitute caregiver. It appeared that, in all cases, the babies were either familiar with their caregivers prior to being left with them or had ample opportunity to become well-acquainted. In the case of three babies, for example, the father provided some or all of the substitute care, and for seven babies, grandparents were caregivers. Moore (1969) found that children who had been left with relatives while parents vacationed showed

little later disturbance, Brazelton (1974) has suggested that grandmothers, aunts and siblings may be particularly likely to reproduce a mother's patterns of caregiving. If that is the case, it may be that these babies experienced a particularly subtle type of continuity in care during separation. Rutter (1972) has suggested that separation from an attachment figure need not involve disruption of the attachment bond. It's interesting to speculate that the experience of babies left with relatives may be particularly effective in sustaining the relationship with mother during her absence. Although we have no data on this point, it seems very likely that some of these caregivers already were or became attachment figures in their own right. Finally, only two of the infants, both in the frequently-separated group, were in the position of having to share the caregiver's attention with other children. In one of these cases, group care had been replaced by substitute care in the baby's own home at the age of six months because the parents felt that the baby had not been receiving enough individual attention. In this sense, the experience of our frequently-separated group was not comparable to that of a daycare sample.

Thus, overall, it is clear that most of the sources of stress accompanying brief separations in hospitals, residential nurseries, and perhaps even daycare centers--such as illness, family discord, abrupt discontinuities of care or the necessity of adapting to strange features of the environment--were absent for the babies in our groups. Indeed, it is difficult to imagine separations occurring under more supportive conditions. Although we cannot tell which of these contextual dimensions were of the greatest influence, it seems probable that most or all contributed jointly to optimizing these babies'

experience. While we appreciate the problems of Type II errors when dealing with very small samples, our data do suggest that the separation experiences of our groups were all within "normal limits." That is, given nontraumatic circumstances and the thoughtful provision of substitute care the one-year-old human infant appears resilient enough to tolerate a considerable range of mother-infant separation.

Further evidence that the circumstances surrounding a separation experience can shape a baby's response to it comes from our data on the group variances. As mentioned earlier, the variances for our infrequently-separated group were smaller than for the other two groups of many of the dependent variables. When we looked more closely at the experience of this group of babies, we found that the context in which their separations had occurred was also very homogeneous for the group as a whole. Six of the seven babies had been left with their grandparents in the grandparents' home while parents vacationed. While it is true that these dimensions of care are almost totally confounded with frequency/duration patterning for this group, we feel that it is at least plausible to attribute the restricted variances to this common experience.

In conclusion, our data offer support for the argument that brief separations from a primary attachment figure need not have deleterious effects. They suggest that, within a surprisingly broad range of experience, it is the quality of substitute care that is important rather than the sheer frequency or duration of separations. What is needed now is further work elucidating just which contextual variables are of particular importance.

We would like to suggest that one potentially fruitful way of accomplishing this would be an interventionist approach. Efforts might be directed towards finding ways of helping parents to arrange for quality substitute care and assessing the results of such efforts, rather than in trying to determine the effects of such complex and heterogeneous variables as either maternal employment or daycare per se.

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Aspects of Naturally-Occurring, Non-Traumatic Separations During the First Year

Table 1

Frequency/Duration Patterning	More-than-Nominal Separations		
	Minimally-Separated (Occasional baby-sitters only) (n=8)	Infrequently-Separated (A few separations of long duration) (n=7)	Frequently-Separated (Many separations of short duration) (n=8)
% of Mothers Employed Part- or Full-Time	100	29.00	75.00
Mean Frequency of any type of separation during the twelfth month	1.06	12.00	19.00
Frequency/Duration Patterning			
Mean number of separations during the first year	1.86	139.00	737.38
Mean number of hours of separation during the first year	219.00	5.61	
Mean number of hours per separation during the first year	123.43		
Substitute Caregivers			
Mean number of different substitute caregivers	1.14	1.75	
% of babies cared for by more than one caregiver	14.00	50.00	
% of babies cared for by:			
Grandparents	86.00	13.00	
Father	0.00	38.00	
Non-relative living in baby's home	0.00	13.00	
Non-relative living elsewhere	14.00	75.00	
Location of Substitute Care			
Mean number of different caregiving locations	1.14	1.75	
% of substitute care given in baby's home	3.14	75.63	

Means and Variances for Dependent Variables Assessing Response to Separation from and Reunion with Mother at Twelve Months of Age

Table 2

	Mean Response			Variance				Bartlett's Test (Chi-Square)
	Minimal Separation (n=18)	Infrequent Separation (n=7)	Frequent Separation (n=8)	ANOVA (F)	Minimal Separation (n=18)	Infrequent Separation (n=7)	Frequent Separation (n=8)	
<u>Separation</u>								
Number of separations in the home during the twelfth month accompanied by distress	42.59	13.57	33.13	1.88	1335.17	407.23	1206.87	2.40
Duration of distress (in seconds) (in the laboratory)	50.61	9.14	43.50	1.12	4208.84	260.14	6348.57	11.07*
Search for mother (in the laboratory)	3.47	3.07	3.13	0.12	4.34	6.04	5.55	0.30
Social interaction with interviewer (in the laboratory)	4.22	5.43	3.69	1.39	5.33	2.29	3.50	1.45
<u>Reunion</u>								
Duration of distress (in seconds) (in the laboratory)	20.22	0.71	11.00	0.98	1703.21	2.25	242.11	36.10**
Greet mother (in the laboratory)	0.97	2.36	0.94	3.52	1.60	1.89	1.03	0.61
Social interaction with mother (in the laboratory)	2.47	2.36	2.94	0.26	3.10	2.81	2.89	0.03
Regain proximity to mother (in the laboratory)	3.58	4.50	3.75	0.63	6.45	4.25	5.29	0.37
Maintain contact with mother (in the laboratory)	3.78	2.00	3.38	1.13	8.42	3.67	6.84	1.26
Number of reunions in the home during the twelfth month accompanied by greeting from the baby	76.12	85.29	87.50	0.51	935.14	203.92	1250.33	4.42